

#2

0590
1/31

OIPE

RAW SEQUENCE LISTING

DATE: 02/13/2002

PATENT APPLICATION: US/10/010,114

TIME: 14:37:19

Input Set : N:\Crif3\RULE60\10010114.raw.txt

Output Set: N:\CRF3\02132002\J010114.raw

1 <110> APPLICANT: Boutin, Raymond H.
 2 <120> TITLE OF INVENTION: Multifunctional Molecular Complexes for Gene Transfer
 3 to Cells
 4 <130> FILE REFERENCE: ahplausa
 5 <140> CURRENT APPLICATION NUMBER: 10/010,114
 6 <141> CURRENT FILING DATE: 2001-11-13
 8 <150> PRIOR APPLICATION NUMBER: 09/425,597
 9 <151> PRIOR FILING DATE: 1999-10-22
 12 <150> PRIOR APPLICATION NUMBER: 08/809,397
 13 <151> PRIOR FILING DATE: 1997-03-21
 14 <150> PRIOR APPLICATION NUMBER: WO 9610038
 15 <151> PRIOR FILING DATE: 1995-09-28
 16 <150> PRIOR APPLICATION NUMBER: US 08/314,060
 17 <151> PRIOR FILING DATE: 1994-09-28
 18 <160> NUMBER OF SEQ ID NOS: 32
 19 <170> SOFTWARE: PatentIn Ver. 2.0
 21 <210> SEQ ID NO: 1
 22 <211> LENGTH: 25
 23 <212> TYPE: PRT
 24 <213> ORGANISM: Vesicular stomatitis virus
 25 <400> SEQUENCE: 1
 26 Lys Phe Thr Ile Val Phe Pro His Asn Gln Lys Gly Asn Trp Lys Asn
 27 1 5 10 15
 28 Val Pro Ser Asn Tyr His Tyr Cys Pro
 29 20 25
 31 <210> SEQ ID NO: 2
 32 <211> LENGTH: 32
 33 <212> TYPE: PRT
 34 <213> ORGANISM: Human immunodeficiency virus type 1
 35 <400> SEQUENCE: 2
 36 Ala Val Gly Ile Gly Ala Leu Phe Leu Gly Phe Leu Gly Ala Ala Gly
 37 1 5 10 15
 38 Ser Thr Met Gly Ala Ala Ser Met Thr Leu Thr Val Gln Ala Arg Gln
 39 20 25 30
 41 <210> SEQ ID NO: 3
 42 <211> LENGTH: 35
 43 <212> TYPE: PRT
 44 <213> ORGANISM: Murine leukemia virus
 45 <400> SEQUENCE: 3
 46 Glu Pro Val Ser Leu Thr Leu Ala Leu Leu Leu Gly Gly Leu Thr Met
 47 1 5 10 15
 48 Gly Gly Ile Ala Ala Gly Val Gly Thr Gly Thr Thr Ala Leu Val Ala
 49 20 25 30

ENTERED

RAW SEQUENCE LISTING — DATE: 02/13/2002
 PATENT APPLICATION: US/10/010,114 TIME: 14:37:19

Input Set : N:\Crf3\RULE60\10010114.raw.txt
 Output Set: N:\CRF3\02132002\J010114.raw

```

50      Thr Gln Gln
51                      35
53 <210> SEQ ID NO: 4
54 <211> LENGTH: 23
55 <212> TYPE: PRT
56 <213> ORGANISM: Human immunodeficiency virus type 1
57 <400> SEQUENCE: 4
58      Ala Val Gly Ile Gly Ala Leu Phe Leu Gly Phe Leu Gly Ala Ala Gly
59      1                      5                      10                      15
60      Ser Thr Met Gly Ala Arg Ser
61                      20
63 <210> SEQ ID NO: 5
64 <211> LENGTH: 17
65 <212> TYPE: PRT
66 <213> ORGANISM: Human immunodeficiency virus type 1
67 <400> SEQUENCE: 5
68      Ala Val Gly Ala Ile Gly Ala Leu Phe Leu Gly Phe Leu Gly Ala Ala
69      1                      5                      10                      15
70      Gly
72 <210> SEQ ID NO: 6
73 <211> LENGTH: 22
74 <212> TYPE: PRT
75 <213> ORGANISM: Influenza virus
76 <400> SEQUENCE: 6
77      Gly Leu Phe Glu Ala Ile Ala Glu Phe Ile Glu Gly Gly Trp Glu Gly
78      1                      5                      10                      15
79      Leu Ile Glu Gly Cys Ala
80                      20
82 <210> SEQ ID NO: 7
83 <211> LENGTH: 25
84 <212> TYPE: PRT
85 <213> ORGANISM: Influenza virus
86 <400> SEQUENCE: 7
87      Gly Leu Phe Gly Ala Ile Ala Gly Phe Ile Glu Asn Gly Trp Glu Gly
88      1                      5                      10                      15
89      Met Ile Asp Gly Trp Tyr Gly Phe Arg
90      20                      25
92 <210> SEQ ID NO: 8
93 <211> LENGTH: 23
94 <212> TYPE: PRT
95 <213> ORGANISM: Human immunodeficiency virus type 1
96 <400> SEQUENCE: 8
97      Ala Val Gly Ile Gly Ala Leu Phe Leu Gly Phe Leu Gly Ala Ala Gly
98      1                      5                      10                      15
99      Ser Thr Met Gly Ala Ala Ser
100     20
102 <210> SEQ ID NO: 9
103 <211> LENGTH: 27
104 <212> TYPE: PRT

```

RAW-SEQUENCE LISTING

DATE: 02/13/2002

PATENT APPLICATION: US/10/010,114

TIME: 14:37:19

Input Set : N:\Crif3\RULE60\10010114.raw.txt

Output Set: N:\CRF3\02132002\J010114.raw

```

105 <213> ORGANISM: SV5 virus
106 <400> SEQUENCE: 9
107      Phe Ala Gly Val Val Ile Gly Leu Ala Ala Leu Gly Val Ala Thr Ala
108      1              5              10              15
109      Ala Asn Val Thr Ala Ala Val Ala Leu Val Lys
110      20              25
112 <210> SEQ ID NO: 10
113 <211> LENGTH: 19
114 <212> TYPE: PRT
115 <213> ORGANISM: SFV virus
116 <400> SEQUENCE: 10
117      Lys Val Tyr Thr Gly Val Tyr Pro Phe Met Trp Gly Gly Ala Tyr Cys
118      1              5              10              15
119      Phe Cys Asp
121 <210> SEQ ID NO: 11
122 <211> LENGTH: 23
123 <212> TYPE: PRT
124 <213> ORGANISM: PH-30 virus
125 <400> SEQUENCE: 11
126      Lys Leu Ile Cys Thr Gly Ile Ser Ser Ile Pro Pro Ile Arg Ala Leu
127      1              5              10              15
128      Phe Ala Ala Ile Asn Ile Pro
129      20
131 <210> SEQ ID NO: 12
132 <211> LENGTH: 22
133 <212> TYPE: PRT
134 <213> ORGANISM: Sendai virus
135 <400> SEQUENCE: 12
136      Phe Phe Gly Ala Val Ile Gly Thr Ile Ala Leu Gly Val Ala Thr Ala
137      1              5              10              15
138      Thr Ala Ala Gln Ile Thr
139      20
141 <210> SEQ ID NO: 13
142 <211> LENGTH: 22
143 <212> TYPE: PRT
144 <213> ORGANISM: SV5 virus
145 <400> SEQUENCE: 13
146      Phe Ala Gly Val Val Ile Gly Leu Ala Ala Leu Gly Val Ala Thr Ala
147      1              5              10              15
148      Thr Ala Ala Gln Val Thr
149      20
151 <210> SEQ ID NO: 14
152 <211> LENGTH: 22
153 <212> TYPE: PRT
154 <213> ORGANISM: NDV virus
155 <400> SEQUENCE: 14
156      Phe Ile Gly Ala Ile Ile Gly Gly Val Ala Leu Gly Val Ala Thr Ala
157      1              5              10              15
158      Thr Ala Ala Gln Ile Thr

```

RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/010,114

DATE: 02/13/2002

TIME: 14:37:19

Input Set : N:\Crf3\RULE60\10010114.raw.txt

Output Set: N:\CRF3\02132002\J010114.raw

```

159                                20
161 <210> SEQ ID NO: 15
162 <211> LENGTH: 28
163 <212> TYPE: PRT
164 <213> ORGANISM: Influenza virus
165 <400> SEQUENCE: 15
166      Gly Leu Phe Gly Ala Ile Ala Gly Phe Ile Glu Asn Gly Trp Glu Gly
167      1                                5                                10                                15
168      Met Ile Asp Gly Trp Tyr Gly Phe Arg His Gln Asn
169      20                                25
171 <210> SEQ ID NO: 16
172 <211> LENGTH: 28
173 <212> TYPE: PRT
174 <213> ORGANISM: Influenza virus
175 <400> SEQUENCE: 16
176      Gly Leu Phe Gly Ala Ile Ala Gly Phe Ile Glu Asn Gly Trp Glu Gly
177      1                                5                                10                                15
178      Leu Val Asp Gly Trp Tyr Gly Phe Arg His Gln Asn
179      20                                25
181 <210> SEQ ID NO: 17
182 <211> LENGTH: 28
183 <212> TYPE: PRT
184 <213> ORGANISM: Influenza virus
185 <400> SEQUENCE: 17
186      Gly Phe Phe Gly Ala Ile Ala Gly Phe Leu Glu Gly Gly Trp Glu Gly
187      1                                5                                10                                15
188      Met Ile Ala Gly Trp His Gly Tyr Thr Ser His Gly
189      20                                25
191 <210> SEQ ID NO: 18
192 <211> LENGTH: 30
193 <212> TYPE: PRT
194 <213> ORGANISM: MMTV virus
195 <400> SEQUENCE: 18
196      Phe Val Ala Ala Ile Ile Leu Gly Ile Ser Ala Leu Ile Ala Ile Ile
197      1                                5                                10                                15
198      Thr Ser Phe Ala Val Ala Thr Thr Ala Leu Val Lys Glu Met
199      20                                25                                30
201 <210> SEQ ID NO: 19
202 <211> LENGTH: 53
203 <212> TYPE: PRT
204 <213> ORGANISM: MoMLV virus
205 <400> SEQUENCE: 19
206      Glu Pro Val Ser Leu Thr Leu Ala Leu Leu Leu Gly Gly Leu Thr Met
207      1                                5                                10                                15
208      Gly Gly Ile Ala Ala Gly Ile Gly Thr Gly Thr Thr Ala Leu Met Ala
209      20                                25                                30
210      Thr Gln Gln Phe Gln Gln Leu Gln Ala Ala Val Gln Asp Asp Leu Arg
211      35                                40                                45
212      Glu Val Glu Lys Ser

```

RAW SEQUENCE LISTING

DATE: 02/13/2002

PATENT APPLICATION: US/10/010,114

TIME: 14:37:19

Input Set : N:\Crf3\RULE60\10010114.raw.txt

Output Set: N:\CRF3\02132002\J010114.raw

```

213                               50
215 <210> SEQ ID NO: 20
216 <211> LENGTH: 53
217 <212> TYPE: PRT
218 <213> ORGANISM: F-MuLV virus
219 <400> SEQUENCE: 20
220      Glu Pro Val Ser Leu Thr Leu Ala Leu Leu Gly Gly Leu Thr Met
221      1                               5                               10                               15
222      Gly Gly Ile Ala Ala Gly Val Gly Thr Gly Thr Thr Ala Leu Val Ala
223      20                               25                               30
224      Thr Gln Gln Phe Gln Gln Leu His Ala Ala Val Gln Asp Asp Leu Lys
225      35                               40                               45
226      Glu Val Glu Lys Ser
227      50
229 <210> SEQ ID NO: 21
230 <211> LENGTH: 53
231 <212> TYPE: PRT
232 <213> ORGANISM: AKV virus
233 <400> SEQUENCE: 21
234      Glu Pro Val Ser Leu Thr Leu Ala Leu Leu Leu Gly Gly Leu Thr Met
235      1                               5                               10                               15
236      Gly Gly Ile Ala Ala Gly Val Gly Thr Gly Thr Thr Ala Leu Val Ala
237      20                               25                               30
238      Thr Gln Gln Phe Gln Gln Leu Gln Ala Ala Met His Asp Asp Leu Lys
239      35                               40                               45
240      Glu Val Glu Lys Ser
241      50
243 <210> SEQ ID NO: 22
244 <211> LENGTH: 27
245 <212> TYPE: PRT
246 <213> ORGANISM: SFV virus
247 <400> SEQUENCE: 22
248      Asp Tyr Gln Cys Lys Val Tyr Thr Gly Val Tyr Pro Phe Met Trp Gly
249      1                               5                               10                               15
250      Gly Ala Tyr Cys Phe Cys Asp Ser Glu Asn Thr
251      20                               25
253 <210> SEQ ID NO: 23
254 <211> LENGTH: 27
255 <212> TYPE: PRT
256 <213> ORGANISM: Sindbis virus
257 <400> SEQUENCE: 23
258      Asp Tyr Thr Cys Lys Val Phe Gly Gly Val Tyr Pro Phe Met Trp Gly
259      1                               5                               10                               15
260      Gly Ala Gln Cys Phe Cys Asp Ser Glu Asn Ser
261      20                               25
263 <210> SEQ ID NO: 24
264 <211> LENGTH: 19
265 <212> TYPE: PRT
266 <213> ORGANISM: Measles virus

```

VERIFICATION SUMMARY

DATE: 02/13/2002

PATENT APPLICATION: US/10/010,114

TIME: 14:37:20

Input Set : N:\Crf3\RULE60\10010114.raw.txt

Output Set: N:\CRF3\02132002\J010114.raw